

BUILDING A NEW HOME

A GUIDE FOR HOMEOWNERS BUILDING A NEW SINGLE FAMILY DWELLING

This pamphlet provides guidelines for homeowners building their own single family dwellings on a single lot in a non-bonded subdivision. Compliance with minimum requirements and approved plans are subject to verification and inspection.



WHAT REGULATIONS GOVERN THE CONSTRUCTION OF SINGLE-FAMILY DWELLINGS ON SINGLE LOTS IN NON-BONDED SUBDIVISIONS

THE CODE OF VIRGINIA

The *Code of Virginia* requires that your new home and any accessory structure on your property comply with the Virginia Uniform Statewide Building Code (VUSBC). By reviewing plans, issuing permits, and performing field inspections, the Department of Public Works and Environmental Services (DPWES) and the Office of Building Code Services (OBCS) help you comply with the provisions of the law.

VIRGINIA UNIFORM STATEWIDE BUILDING CODE

Fairfax County is required to enforce the VUSBC, which incorporates by reference the Council of American Building Officials (CABO) One and Two Family Dwelling Code, the CABO Model Energy Code, the Building Officials and Code Administrators (BOCA) National Building Code, the International Mechanical Code, the International Plumbing Code, and the National Electrical Code. These Codes may be purchased from Maps and Publications, located in the Government Center, 12000 Government Center Parkway, Suite 156, Fairfax, Virginia, 22035, telephone **703-324-2974**.

THE PERMIT APPLICATION CENTER OFFICE OF BUILDING CODE SERVICES

Hours of Operation for Walk-in Customers:

Mon. - Thu. 8:00 a.m. - 4:00 p.m.

Fri. 9:15 a.m. to 4:00 p.m.

Other publications and forms are
available on the DPWES website:

www.co.fairfax.va.us/dpwes



Herrity Building
12055 Government Center Parkway
Fairfax, Virginia 22035
Telephone: 703-222-0801
TTY: 703-324-1877

Telephone Hours: 8:00 a.m. to 4:30 p.m.

ZONING REQUIREMENTS

Check with the Zoning Permit Review Branch at **703-222-1082** to determine minimum yard and other zoning-related requirements. Minimum yard (setback) requirements, as set forth in the County Zoning Ordinance, represent the minimum distances from the property boundary lines that are required for the location of a structure.

COVENANTS AND DEED RESTRICTIONS

Many of the subdivisions and developments in Fairfax County have private deed restrictions and covenants regulating the construction of single family dwellings on single non-bonded lots beyond the limitations contained in County Ordinances. These amount to contractual agreements and thus the County does not enforce covenants and deed restrictions and is not always aware of their existence. Should you have questions about your development's restrictions, you may obtain information from your homeowners' association, civic association, or the Land Records Office at the Jennings Building (Judicial Center), Third Floor, 4110 Chain Bridge Road, Fairfax, Virginia, telephone **703-591-8580**.

CHESAPEAKE BAY PRESERVATION ORDINANCE

This ordinance was enacted to protect the Chesapeake Bay, one of the world's most productive estuaries, from pollution due to land use and development. All of Fairfax County runoff drains into the Potomac River and ultimately the Chesapeake Bay. In an effort to protect and improve the quality of the bay, its tributaries and state waters, Fairfax County is designated as a Chesapeake Bay Preservation Area. As a result, all grading plans are reviewed to guarantee that the land-disturbing activity conforms to the performance criteria set forth by the ordinance. Check with the Office of Site Development Services at **703-324-1720** for more information regarding the requirements of the Chesapeake Bay Preservation Ordinance.

CONSERVATION AGREEMENT

The Conservation Agreement guarantees that erosion and sediment control measures on the grading plan are installed and maintained, and it also guarantees that the lot will be graded according to the approved grading plan. When construction is completed and the county site inspectors have approved the site, the conservation deposit will be returned, provided that the county has not expended funds to correct violations of erosion and sediment control regulations.

Two copies of a completed Conservation Agreement and a \$1000 deposit are required to be submitted to the Site Permits Section prior to the release of the approved grading plan. Conservation Agreement forms can be obtained at the Herrity Building at Plan Control in Room 111 and the Site Permits Section on the 2nd floor.

HEALTH DEPARTMENT

If public water or sewer is not available, call the Health Department at **703-246-2201** for information on wells and septic fields.

WHAT PERMITS ARE REQUIRED

The number and type of permits required depend on the characteristics of the project, and they are as follows:

- ! A ***building permit*** is required for construction of architectural and structural elements of new homes.
- ! An ***electrical permit*** is required for all electrical installations.
- ! A ***mechanical permit*** is required for installations of all elements and appliances associated with heating and air conditioning systems.
- ! A ***plumbing permit*** is required for installations of all elements and appliances associated with plumbing and gas piping systems.
- ! A ***Virginia Department of Transportation (VDOT) permit*** is required if the lot is located on a public road with the driveway entering a state road.
- ! A ***sewage disposal system construction permit*** is required from the Health Department if the single family dwelling is constructed with an individual sewage disposal system.
- ! A ***water supply construction permit*** is required from the Health Department if the single family dwelling is constructed with an individual well.

WHERE TO APPLY FOR PERMITS

Application for a building, electrical, mechanical and plumbing permit can be made at the Permit Application Center, OBCS, Herrity Building, 2nd floor, 12055 Government Center Parkway, Fairfax, Virginia 22035-5504, Mon. - Thu. 8:00 a.m. to 4:00 p.m., Friday 9:15 a.m. - 4:00 p.m., telephone **703-222-0801**.

Application for a VDOT permit can be made at the VDOT Permits Office at 3555 Chain Bridge Road, Fairfax, Virginia 22030, telephone **703-383-2888**. The permit must be secured prior to obtaining the building permit. For driveways entering non-state roads, contact Plan Control for additional information at **703-324-1730**.

Application for a sewage disposal system construction permit and/or a water supply construction permit can be made at the Health Department at 10777 Main Street, Fairfax, Virginia 22030, telephone **703-246-2201**.

WHAT COSTS ARE INVOLVED

BUILDING PERMIT

Building permit fees for residential single family dwellings are calculated by the square foot based on the inspectable areas, including basement, cellars, and horizontally projected roof areas.

A filing fee (50% of the building permit fee) must be paid at the time of application for a building permit. Call the Permit Application Center at **703-222-0801** to obtain information regarding the fee structure. Permit fees cannot be estimated by county staff prior to permit application submission.

MECHANICAL, ELECTRICAL, PLUMBING PERMITS

After the building permit is issued, separate electrical, mechanical and plumbing permits can be issued. Separate fees will be charged for each "trade" permit, based on the equipment listed on the permit applications. Call the Permit Application Center at **703-222-0801** to obtain information regarding the fee structure.

GRADING PLAN REVIEW FEE

Grading plan review fees are set forth in the permit fee schedule. The full fee is required to be paid at the same time the grading plan is submitted. Call Plan Control at **703-324-1730** to obtain information regarding the fee schedule.

PRO-RATA FEE

The pro-rata fee is determined by the Environmental and Facilities Inspections Division. The fee is based on the increase in the amount of impervious area per acre created by the proposed construction. Call the Environmental and Facilities Inspections Division at **703-324-1590** to obtain information regarding pro-rata fees.

CONSERVATION DEPOSIT

A \$1000 conservation deposit is required to accompany the Conservation Agreement. This deposit will be returned upon completion of the project provided there are no erosion control violations. Call the Site Permits Section at **703-324-1510** to obtain information regarding the Conservation Agreement and Conservation Deposit.

VDOT PERMIT

Contact VDOT at **703-383-2888** to obtain the current fee for their permit, when applicable.

HEALTH DEPARTMENT RELATED PERMITS

Call the Division of Environmental Health of the Health Department at **703-246-2201** to obtain the current fee amount for sewage disposal system and/or water supply construction permits. Fees must be paid prior to building permit approval.

PUBLIC WATER/SEWER

For information on public water connections, contact the Fairfax County Water Authority at **703-659-5600** or **703-659-5800**. For information on public sewer and sewer tap fees, call the Office of Waste Management at **703-324-5015**.

WHO SHOULD APPLY FOR PERMITS

You may secure the permits in your own name; however, if a contractor is to perform the work, Fairfax County strongly suggests that the contractor secure the permit and be listed on the permit as the party responsible for the work. In this way, the County will be in a better position to assist you in gaining compliance with codes if the work is defective. A contractor must be properly licensed in order to obtain a permit; please note, if you build more than one house every 24 months, you are considered an owner/developer and therefore you must be licensed as a building contractor with the state.

WHAT ARE SITE RELATED REQUIREMENTS

GRADING PLAN

Retain a certified land surveyor, certified architect, or professional civil engineer licensed in the Commonwealth of Virginia to prepare a grading plan for the property. The following must be included on the plan.

- ! Vicinity Map.
- ! Existing contours of the land (topography).
- ! Proposed contours of the land.
- ! House location, address and tax map number.
- ! Soil types, soil maps, and the soils test report for the site in problem soil areas.
- ! Limits of clearing and grading.
- ! First floor elevation.
- ! Basement elevation.
- ! Garage elevation and driveway profile.
- ! Siltation and erosion control measures/plan.
- ! Easements (existing and proposed).
- ! Septic field and well location including septic field design details and well to dwelling water line route.
- ! Underground location of public water line, electric and/or gas lines if the lot is to be served by a septic field or well.
- ! Property lines with bearing and distance.
- ! Distance from house corners to property lines (minimum yard information).
- ! Signature and seal of the Civil Engineer, Certified Land Surveyor or Certified Architect licensed in the Commonwealth of Virginia.

WHAT ARE BUILDING RELATED REQUIREMENTS

BUILDING PLANS

Three copies of the building plans must be submitted. All structural and architectural elements of a single family dwelling must be completely detailed and included on a comprehensive set of building plans. The plans must be scaled drawings showing all dimensions. The minimum acceptable scale is 1/8 inch = 1 foot and the following information must be included.

- ! Code and code year used for the design, CABO One & Two Family Dwelling Code or BOCA National Building Code.
- ! Architectural Elements:
 - Floor plans of all levels with all rooms labeled.
 - Location of smoke detectors.
 - Elevations (front, sides and rear) indicating window and door dimensions.
 - Insulation R-values.
 - Whirlpool/Jacuzzi/oversized tub manufacturer's information showing structural loading requirements.
 - Location of safety glazing.
 - Manufacturer's design specifications for pre-fabricated fireplaces.
- ! Structural Elements:
 - Foundation plan.
 - Footing details (minimum footing depth is 24").
 - Research or evaluation report by a model code evaluation service and load calculations for all adjustable columns.
 - Structural framing plans of all levels accurately detailing all members.
 - Structural details of connections.
 - Typical wall section with sheathing thickness and type (a research or evaluation report by a model code evaluation service is required for any special product or device used to resist horizontal load).
 - Roof framing plan.
 - Cross sections with the sizes of all posts, joists, and beams.
 - List of material specifications including, but not limited to: grade and species of lumber, concrete strength, and steel strength.
 - List of design load criteria: live load, dead load, snow load, wind load, bearing capacity, and lateral earth pressure (for Fairfax County: ground snow load = 30 PSF and wind speed = 80 mph).
- ! *Townhouse & Single Family Dwelling Cover Sheet:* Fairfax County requires that all building plans for new single family dwellings include a *Townhouse & Single Family Dwelling Cover Sheet*. These cover sheets may be obtained at the Permit Application Center on the 2nd floor of the Herrity Building or at the Building Plan Review Division on the 3rd floor. A set of instructions is also available which fully explains all the cover sheet requirements. The cover sheet must be completed by the building designer.

- ! *Energy Trade-Off Worksheet*: Fairfax County is required to enforce the CABO Model Energy Code. Provisions of this code require that the building envelope (those elements which enclose conditioned spaces) of all new homes be designed to maximize thermal resistance and minimize air leakage. Energy trade-off calculations are a method to determine compliance with those provisions. A copy of the applicable energy envelope calculations must be attached to each set of building drawings. A handout entitled *Energy Trade-Off Worksheet* is available from the Building Plan Review Division or the Permit Application Center. This handout outlines code requirements and provides detailed step-by-step instructions.
- ! Name and occupation of the building designer.
- ! If plans are prepared by a Professional Engineer or Registered Architect, at least one set of construction drawings must bear the **original** Professional Engineer's or Registered Architect's seal and signature. This set will be retained by the County.

ALL DRAWINGS MUST BE PREPARED TO SCALE IN INK OR EQUAL ON SHEETS NO SMALLER THAN 11" x 17".

PROBLEM SOILS

A problem soil is a soil type within Fairfax County which may have a high water table, expansive clays, low bearing capacities, frost heave potential or other behavioral problems. The county classifies these soils as Class A or Class B. If the single family dwelling is to be built on a problem soil, a geotechnical investigation may be required to be conducted by a professional geotechnical engineer. In addition, all foundations must be designed to take the soil's behavior into consideration; any special details or other design requirements must be specifically noted on the building plans. To determine if your lot contains a problem soil, contact the Special Projects Branch of the Office of Site Development Services at **703-324-1700**. If a geotechnical investigation is required, a copy of the corresponding geotechnical report must be submitted with the building plans.

TRUSS SHOP DRAWINGS

If the roof and/or floor construction is to be comprised of pre-engineered trusses, then the truss shop drawings must also be submitted to the Building Plan Review Division. Shop drawings may be submitted after the building permit has been issued, but prior to any truss erection. Attach the *Fairfax County Truss Plan Cover Sheet* to each set of shop drawings. This cover sheet, available at the Building Plan Review Division, shall be completed by the building designer or by a licensed professional acting as the reviewer of record. This set will be retained by the county. All truss shop drawings shall bear the seal and signature of the truss designer; please ensure that the county copy has an original seal and signature. Truss shop drawings submittals can be reviewed by the Building Plan Review Division in one day.

WHAT IS THE REVIEW PROCESS

The review process begins when the grading plans and/or the building plans are complete and have been submitted, along with a building permit application, to the Permit Application Center on the second floor of the Herrity Building. The permit will be "logged in," and the project will be assigned a permit number to identify the project. Once the permit application number has been assigned, the grading plans may proceed in the manner described below in GRADING PLAN PROCESS.

The building plans will be scaled to determine the permit fee and a plan tracking number will be assigned to the plans. When the permit filing fee is paid, the plans will be forwarded to the Building Plan Review Division as described below in *BUILDING PLAN PROCESS*.

The building permit application will be returned to you for obtaining the approval signatures from the applicable offices required for permit issuance. The signatures are placed on the lines adjacent to their corresponding departments as listed on the building permit application and as listed below.

- ! *Zoning*: the Zoning Permit Review Branch will sign off after the grading plan has been reviewed and approved for zoning related issues.
- ! *Site Permits*: the Site Permits Section will sign off after the grading plan is approved, the pro-rata fee is paid, the Conservation Agreement and Conservation Deposit are submitted, and the VDOT permit number is received.
- ! *Sanitation*: the Office of Waste Management will sign off after payment for all sewer fees has been made (when applicable).
- ! *Health Dept.*: the Health Department will sign off after their review and approval of the grading plan, if applicable.
- ! *Building Review*: the Building Plan Review Division will sign off only after all other signatures have been obtained and after the building plans are approved.

GRADING PLAN PROCESS

- ! After the building permit numbers have been assigned, the grading plan is ready for review. Your first step is then dependent on whether the dwelling is served by a well and/or septic system. If so, nine sets of the grading plan along with the building permit application must be delivered to the Health Department. After the Health Department review and approval, 1 set will be retained. The remaining eight sets must then be submitted to Plan Control in Room 111 of the Herrity Building. If there is neither septic nor well, then your first step is to submit eight sets of the grading plan to Plan Control. In both cases, at the time of submittal to Plan Control, 100% of the grading plan review fee must be paid.
- ! Plan Control will forward one copy of the grading plan to the Bonds and Agreement Branch to determine the pro-rata fee.
- ! Plan Control will also forward the remaining grading plans to the Office of Site Development Services for various reviews and approvals.
- ! The VDOT permit number (if applicable) and the pro-rata fee must be submitted to Plan Control. Once this is completed the approved grading plans will be forwarded to the Site Permits Section.
- ! The Conservation Agreement and the Conservation Deposit must be submitted to the Site Permits Section. Once this is completed, the Site Permits Section will sign off on the building permit application and release 4 copies of the approved grading plan to you.

- ! You must then submit one copy of the approved grading plan to the Zoning Permit Review Branch for review and approval; that copy will be retained. If all zoning requirements have been met, the Zoning Permit Review Branch will sign off on the building permit application.
- ! You must also submit another copy of the grading plan with the building plans; see *BUILDING PLAN PROCESS*.

BUILDING PLAN PROCESS

- ! Once the building permit number and plan tracking number have been assigned and the filing fee has been paid, the building plans are forwarded to the Building Plan Review Division for a complete review.
- ! The building plans will be approved by the Building Plan Review Division only after a copy of the county approved grading plan is submitted and reviewed in conjunction with the building plans. Please note: the grading plan review process and the building plan review process can take place simultaneously, however final approval by the Building Plan Review Division will be delayed until the approved grading plan is submitted for review with the building plans.
- ! Once all required signatures have been obtained on the building permit application and the plans have been approved by the Building Plan Review Division, the building plans may be released from the Building Plan Review Division public counter in Room 324 of the Herrity Building. You must then bring the approved grading plan, approved building plans and the building permit application to Log Out on the 2nd floor of the Herrity Building. There, the permit will be processed, and one set of the approved building plans will be retained for county records.
- ! If a third party inspection agency is to complete the foundation inspections for a non-problem soils site, you must inform the Residential Inspections Division (RID) on the 6th floor of the Herrity Building prior to final payment of the building permit fee. The agency chosen must be approved by RID to perform foundation inspections in the county.
- ! The last step is to pay the remainder of the building permit fee at the Cashier's Office on the 2nd floor of the Herrity Building.

MECHANICAL, ELECTRICAL, AND PLUMBING PERMIT PROCESS

- ! After the building permit is issued, separate electrical, mechanical and plumbing permits can be issued.
- ! Electrical and plumbing permits do not require a plan submittal or review process. These permits can be obtained by you or by a licensed contractor hired to perform the work. Code compliance will be determined at the time of the inspection.
- ! It is the responsibility of the HVAC contractor to submit a completed *Residential Heat Loss and Heat Gain Certification Form* to be reviewed by a mechanical reviewer in the Building Plan Review Division prior to the issuance of a Mechanical permit. A copy of the energy envelope worksheets which were approved during the building plan review process must be attached to this certification form for proper review and approval.

WHAT ARE THE REQUIREMENTS FOR PUBLIC UTILITIES

FAIRFAX COUNTY WATER AUTHORITY

For information on connection to public water, contact the Fairfax County Water Authority at **703-698-5600** or **703-698-5800**.

OFFICE OF WASTE MANAGEMENT

Call the Office of Waste Management at **703-324-5015** for information on the availability of public sewer and sewer tap fees.

MISS UTILITY

Call "Miss Utility" at **1-800-257-7777** before excavating to ensure that the construction does not interfere with underground utility lines. "Miss Utility" is a free service to anyone who is planning to excavate. Companies such as Dominion Virginia Power, Washington Gas, Columbia Gas, Verizon Communications, and Cox Cable support "Miss Utility" to prevent damage to their buried lines. Call at least 48 hours prior to excavating. The various companies will mark the path of underground utilities on the property. If you fail to contact Miss Utility and damage occurs, you will be liable for all costs of repair.

WHEN ARE INSPECTIONS REQUIRED

Inspections are required by the VUSBC to ensure that the structure and the electrical, plumbing, gas, and mechanical work and equipment conform to the approved plans and meet the intent of the VUSBC for structural and other safety considerations.

A companion handout, entitled *Inspection Timing Checklist*, is available from the Permit Application Center. This pamphlet provides a complete list of required residential inspections for new single family dwellings, the appropriate inspection agency, the type of permit to which the inspection applies, and the stage of construction at which the project should be inspected.

PLEASE NOTE: any single family dwelling built on a problem soil is required to have all foundation inspections performed by a licensed private geotechnical engineer. Any single family dwelling constructed on a non-problem soil may opt to use a private geotechnical engineer as well. Consult the *Inspection Timing Checklist* handout or contact the Residential Inspections Division at **703-631-5101** for further information.

A COPY OF THE APPROVED GRADING PLAN AND BUILDING PLANS MUST BE ON THE JOB SITE AND MUST BE AVAILABLE TO THE INSPECTOR DURING EACH INSPECTION OR NO INSPECTIONS WILL BE PERFORMED.

WHEN AND WHERE TO CALL FOR INSPECTIONS

Pursuant to the VUSBC, it is the responsibility of the permit holder or the permit holder's representative to notify the county when the stages of construction are reached that require an inspection. All ladders, scaffolds and test equipment required to complete an inspection or test shall be provided by the property owner, permit holder or their representative.

The Inspection Request Center's telephone number is **703-222-0455**. Please call between the hours of 8:00 a.m. and 4:20 p.m., Monday through Friday, except on county holidays. Please have your permit number available to give to the inspection request operator.

Customers may also use the telephone Automated Inspection Request System (AIRS), at **703-222-2474**, or Building Code Services Online, at *www.co.fairfax.va.us/isisnet*, 24 hours a day, seven days a week, to schedule and cancel inspections. Request made prior to 11:59 p.m. will be scheduled for the next working day.

FOR FURTHER INFORMATION ON PERMIT REQUIREMENTS FOR BUILDING A NEW HOME, CONTACT THE PERMIT APPLICATION CENTER AT 703-222-0801. FOR FURTHER INFORMATION CONCERNING BUILDING CODE REQUIREMENTS ON, PLEASE CONTACT THE BUILDING PLAN REVIEW DIVISION AT 703-222-0114.

**FAIRFAX COUNTY AGENCIES TO CONTACT
FOR INFORMATION ON BUILDING A NEW HOME**

REQUIREMENTS FOR PERMITS	Permit Application Center Office of Building Code Services, DPWES 12055 Government Center Parkway, 2nd Floor Fairfax, Virginia 22035-5504 703-222-0801 TTY 703-324-1877
SUBDIVISION AND DEVELOPMENT RESTRICTIONS	Land Records Office The Jennings Building, (Judicial Center) Third Floor 4110 Chain Bridge Road Fairfax, Virginia 22030 703-591-8580
MINIMUM YARD REQUIREMENTS	Zoning Permit Review Branch Department of Planning and Zoning 12055 Government Center Parkway, 2nd Floor Fairfax, Virginia 22035-5508 703-222-1082 www.co.fairfax.va.us/gov/ocp
VDOT PERMIT	Virginia Department of Transportation VDOT Permits Office 3555 Chain Bridge Road Fairfax, Virginia 22030 703-383-2888
GRADING PLAN REQUIREMENTS	Environmental and Facilities Review Division Office of Site Development Services, DPWES 12055 Government Center Parkway, 5th Floor Fairfax, Virginia 22035-5503 703-324-1720
REQUIREMENTS FOR WELL/SEPTIC SYSTEM PERMITS	Division of Environmental Health Health Department 10777 Main Street Fairfax, Virginia 22030 703-246-2201 www.co.fairfax.va.us/service/hd
PRO-RATA FEE	Environmental and Facilities Review Division Office of Site Development Services, DPWES 12055 Government Center Parkway, 3rd Floor Fairfax, Virginia 22035-5503 703-324-1590

CONSERVATION AGREEMENT	<p>Site Permits Section Office of Building Code Services, DPWES 12055 Government Center Parkway, 2nd Floor Fairfax, Virginia 22035-5504 703-324-1510</p>
BUILDING PLAN REQUIREMENTS	<p>Building Plan Review Division Office of Building Code Services, DPWES 12055 Government Center Parkway, 3rd Floor Fairfax, Virginia 22035-5504 703-222-0114</p>
PUBLIC WATER	<p>Fairfax County Water Authority 8560 Arlington Boulevard, Box 1500 Merrifield, Virginia 22116 703-698-5600 or 703-698-5800 TTY 703-698-7025 www.fcwa.org</p>
PUBLIC SEWER	<p>Office of Waste Management, DPWES 12000 Government Parkway, 3rd Floor Fairfax, Virginia 22035-0059 703-324-5015</p>
HOW TO PREVENT DAMAGE TO BURIED UTILITY LINES	<p>"Miss Utility" (Free Service to the Permit Holder Who is Planning to Excavate) 1-800-257-7777</p>
REQUEST INSPECTIONS	<p>Inspection Request Center Office of Building Code Services, DPWES 12055 Government Center Parkway, 3rd Floor Fairfax, Virginia 22035-5504 703-222-0455 (voice) 703-222-2474 (AIRS)</p>

This document is available in an alternative format upon request. Please contact the ADA representative for the Office of Building Code Services, Room 646, the Herrity Building, 12055 Government Center Parkway, Fairfax, Virginia 22035-5502. Call 703-324-1828. Allow seven days for preparation of material.